

I claim:

1. An optically actuated transducer system comprising:

a light emitter;

a light emitter driver circuit receiving an audio signal, said light emitter driver circuit modulating current to said light emitter;

a speaker membrane;

an absorber layer being applied to said speaker membrane; and

an optical delivery device receiving light from said light emitter on one end, the other end of said optical delivery device contacting said absorber layer, said absorber layer converting the light to heat, the absorber layer experiencing a thermal expansion, the thermal expansion causing the speaker membrane to make linear motion and produce an acoustic output.

2. The optically actuated transducer system of claim 1, wherein:

said optical delivery device being positioned such that the angle between a face of said speaker membrane and said optical delivery device is substantially perpendicular.

3. The optically actuated transducer system of claim 2, wherein:

said optical delivery device being a fiber optic cable.

4. The optically actuated transducer system of claim 1,
further comprising:

a periphery of said speaker membrane being attached to a
mounting ring, said mounting ring being attached to a transducer
compartment, said transducer compartment retaining said optical
delivery device.

5. The optically actuated transducer system of claim 1,
wherein:

said speaker membrane being fabricated from a polymer
plastic.

6. The optically actuated transducer system of claim 1,
wherein:

said absorber layer being fabricated from a nickel foil.

7. The optically actuated transducer system of claim 1,
wherein:

said absorber layer being fabricated from a layer of gallium
arsenide.

8. An optically actuated transducer system comprising:

a light emitter;

a light emitter driver circuit receiving an audio signal, said light emitter driver circuit modulating current to said light emitter;

a fiber optic cable receiving light from said light emitter on one end;

a transducer unit including a speaker membrane and a transducer compartment;

an absorber layer being attached to said speaker membrane, said speaker membrane being attached to said transducer compartment, said transducer compartment retaining said fiber optic cable such that thereof contacts said absorber layer, said absorber layer converting the light to heat, the absorber layer experiencing a thermal expansion, the thermal expansion causing the speaker membrane to make linear motion and produce an acoustic output.

9. The optically actuated transducer system of claim 8, wherein:

said fiber optic cable being positioned such that the angle between a face of said speaker membrane and said optical delivery device is substantially perpendicular.

10. The optically actuated transducer system of claim 8,
further comprising:

a periphery of said speaker membrane being attached to a
mounting ring, said mounting ring being attached to said transducer
compartment.

11. The optically actuated transducer system of claim 8,
wherein:

said speaker membrane being fabricated from a polymer
plastic.

12. The optically actuated transducer system of claim 8,
wherein:

said absorber layer being fabricated from a nickel foil.

13. The optically actuated transducer system of claim 8,
wherein:

said absorber layer being fabricated from a layer of gallium
arsenide.

14. An optically actuated transducer system comprising:

a light emitter;

a light emitter driver circuit receiving an audio signal, said light emitter driver circuit modulating current to said light emitter;

a speaker membrane;

an absorber layer being applied to said speaker membrane;

an optical delivery device receiving light from said light emitter on one end; and

an optical beam steering system receiving light on one surface from said optical delivery device and reflecting said light at a different angle, another surface of said optical delivery device contacting said absorber layer, said absorber layer converting the light to heat, the absorber layer experiencing a thermal expansion, the thermal expansion causing the speaker membrane to make linear motion and produce an acoustic output.

15. The optically actuated transducer system of claim 14, wherein:

said optical steering system including a first ball lens, a second ball lens, and a prism reflector, light from said optical delivery device being focused through said first ball lens, the light being reflected by said prism reflector and refocused through said second ball lens into said absorber layer.

16. The optically actuated transducer system of claim 14,
wherein:

said optical delivery device being positioned such that the
angle between a face of said speaker membrane and said optical
delivery device is substantially parallel.

17. The optically actuated transducer system of claim 16,
wherein:

said optical delivery device being a fiber optic cable.

18. The optically actuated transducer system of claim 14,
further comprising:

a periphery of said speaker membrane being attached to a
mounting ring, said mounting ring being attached to a transducer
compartment, said transducer compartment retaining said optical
delivery device.

19. The optically actuated transducer system of claim 14,
wherein:

said speaker membrane being fabricated from a polymer
plastic.

20. The optically actuated transducer system of claim 14,
wherein:

said absorber layer being fabricated from a nickel foil.

21. The optically actuated transducer system of claim 14,
wherein:
said absorber layer being fabricated from a layer of gallium
arsenide.